

*Re-sum***RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/806,709

Source:

Date Processed by STIC: 03/14/2005

ENTERED



RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/806,709

DATE: 03/14/2005
TIME: 10:06:35

Input Set : N:\DA\US09806709.raw
Output Set: N:\CRF4\03142005\I806709.raw

1 <110> APPLICANT: LOOSMORE, Sheena M.
2 YANG, Yan-Ping
3 KLEIN, Michel H.
4 <120> TITLE OF INVENTION: PROTECTIVE RECOMBINANT HAEMOPHILUS INFLUENZAE HIGH
5 MOLECULAR WEIGHT PROTEINS
6 <130> FILE REFERENCE: 1038-1138 MIS
7 <140> CURRENT APPLICATION NUMBER: US/09/806,709
8 <141> CURRENT FILING DATE: 2001-04-04
9 <150> PRIOR APPLICATION NUMBER: PCT/CA99/00938
10 <151> PRIOR FILING DATE: 1999-10-07
11 <150> PRIOR APPLICATION NUMBER: 09/167,568
12 <151> PRIOR FILING DATE: 1998-10-07
13 <150> PRIOR APPLICATION NUMBER: 09/206,942
14 <151> PRIOR FILING DATE: 1999-12-08
15 <160> NUMBER OF SEQ ID NOS: 95
16 <170> SOFTWARE: PatentIn Ver. 2.1
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 15
20 <212> TYPE: PRT
21 <213> ORGANISM: Haemophilus influenzae
22 <400> SEQUENCE: 1
Met Asn Lys Ile Thr Arg Leu Lys Phe Ser Lys Arg Leu Asn Ala
1 5 10 15
26 <210> SEQ ID NO: 2
27 <211> LENGTH: 86
28 <212> TYPE: DNA
29 <213> ORGANISM: Haemophilus influenzae
30 <400> SEQUENCE: 2
31 ctagaaataa ttttgttaa cttaagaag gagatataca tatgaacaag atatatcgtc 60
32 tcaaattcag caaacgcctg aatgtc 86
34 <210> SEQ ID NO: 3
35 <211> LENGTH: 80
36 <212> TYPE: DNA
37 <213> ORGANISM: Haemophilus influenzae
38 <400> SEQUENCE: 3
39 ttataaaaaa caaatggaaa ttcttcctct atatgtatac ttgttctata tagcagagt 60
40 taatcggtt gggactac 80
42 <210> SEQ ID NO: 4
43 <211> LENGTH: 24
44 <212> TYPE: PRT
45 <213> ORGANISM: Haemophilus influenzae
46 <400> SEQUENCE: 4
47 Met Pro Asp Asn Val Ser Ile Asn Ala Glu Thr Ala Gly Arg Ser Asn

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/806,709

DATE: 03/14/2005

TIME: 10:06:35

Input Set : N:\DA\US09806709.raw

Output Set : N:\CRF4\03142005\I806709.raw

48 1 5 10 15
49 Thr Ser Glu Asp Asp Glu Tyr Thr
50 20
52 <210> SEQ ID NO: 5
53 <211> LENGTH: 114
54 <212> TYPE: DNA
55 <213> ORGANISM: Haemophilus influenzae
56 <400> SEQUENCE: 5
57 ctagaaaataa ttttgttaa ctttaagaag gagatataca tatgccggat aatgtatcta 60
58 ttaatgcaga aacagcagga cgccggataa cttcagaaga cgtatgaatac acgg 114
60 <210> SEQ ID NO: 6
61 <211> LENGTH: 114
62 <212> TYPE: DNA
63 <213> ORGANISM: Haemophilus influenzae
64 <400> SEQUENCE: 6
65 tttattaaaa caaattgaaa ttcttcctct atatgtatac ggccattttttt atagataatt 60
66 acgtctttgt cgtccctgcgt cgttatgaag ttttctgcta ctatgtgcc ctag 114
68 <210> SEQ ID NO: 7
69 <211> LENGTH: 21
70 <212> TYPE: PRT
71 <213> ORGANISM: Haemophilus influenzae
72 <400> SEQUENCE: 7
73 Met Pro Asp Asp Val Thr Ile Glu Ala Glu Asp Pro Leu Arg Asn Asn
74 1 5 10 15
75 Thr Gly Ile Asn Asp
76 20
78 <210> SEQ ID NO: 8
79 <211> LENGTH: 105
80 <212> TYPE: DNA
81 <213> ORGANISM: Haemophilus influenzae
82 <400> SEQUENCE: 8
83 ctagaaaataa ttttgttaa ctttaagaag gagatataca tatgcctgtat gatgttaacaa 60
84 ttgaaggccga agacccctt ccgtataata ccgtataaaa tgatg 105
86 <210> SEQ ID NO: 9
87 <211> LENGTH: 105
88 <212> TYPE: DNA
89 <213> ORGANISM: Haemophilus influenzae
90 <400> SEQUENCE: 9
91 tttattaaaa caaattgaaa ttcttcctct atatgtatac ggactactac attgttaact 60
92 tcggcttcgt gggaaagcgt tattatggcc atatttacta cttaa 105
94 <210> SEQ ID NO: 10
95 <211> LENGTH: 13
96 <212> TYPE: PRT
97 <213> ORGANISM: Haemophilus influenzae
98 <400> SEQUENCE: 10
99 Thr Ser Gly Thr Leu Val Ile Asn Ala Lys Asp Ala Glu
100 1 5 10
102 <210> SEQ ID NO: 11
103 <211> LENGTH: 41

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/806,709

DATE: 03/14/2005
 TIME: 10:06:35

Input Set : N:\DA\US09806709.raw
 Output Set: N:\CRF4\03142005\r806709.raw

```

104 <212> TYPE: DNA
105 <213> ORGANISM: Haemophilus influenzae
106 <400> SEQUENCE: 11
107 caaccagcgg taccttggtt attaacgcaa aagacgctga g          41
109 <210> SEQ ID NO: 12
110 <211> LENGTH: 8
111 <212> TYPE: PRT
112 <213> ORGANISM: Haemophilus influenzae
113 <400> SEQUENCE: 12
114 Val Asn Ile Ala Asp Asn Gly Arg
115      1           5
117 <210> SEQ ID NO: 13
118 <211> LENGTH: 29
119 <212> TYPE: DNA
120 <213> ORGANISM: Haemophilus influenzae
121 <400> SEQUENCE: 13
122 gcgttaataat cgctgataaac gggcggttag          29
124 <210> SEQ ID NO: 14
125 <211> LENGTH: 45
126 <212> TYPE: DNA
127 <213> ORGANISM: Haemophilus influenzae
128 <400> SEQUENCE: 14
129 ggccaagctt ctcgagctac cgcgcgttat cagcgatatt aacgc          45
131 <210> SEQ ID NO: 15
132 <211> LENGTH: 8
133 <212> TYPE: PRT
134 <213> ORGANISM: Haemophilus influenzae
135 <400> SEQUENCE: 15
136 Lys Arg Val Leu Glu Lys Val Lys
137      1           5
139 <210> SEQ ID NO: 16
140 <211> LENGTH: 36
141 <212> TYPE: DNA
142 <213> ORGANISM: Haemophilus influenzae
143 <400> SEQUENCE: 16
144 ccggaattcc gaaacgcgtc cttgaaaaag taaaag          36
146 <210> SEQ ID NO: 17
147 <211> LENGTH: 9
148 <212> TYPE: PRT
149 <213> ORGANISM: Haemophilus influenzae
150 <400> SEQUENCE: 17
151 Thr Asn Val Ala Asp Asp Gly Gln Pro
152      1           5
154 <210> SEQ ID NO: 18
155 <211> LENGTH: 31
156 <212> TYPE: DNA
157 <213> ORGANISM: Haemophilus influenzae
158 <400> SEQUENCE: 18
159 taccaatgtt gctgacgatg gacagccgta g          31

```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/806,709

DATE: 03/14/2005
TIME: 10:06:35

Input Set : N:\DA\US09806709.raw
Output Set: N:\CRF4\03142005\I806709.raw

```

161 <210> SEQ ID NO: 19
162 <211> LENGTH: 39
163 <212> TYPE: DNA
164 <213> ORGANISM: Haemophilus influenzae
165 <400> SEQUENCE: 19
166 cgcggatcc acggctgtcc atcgtcagca acattggta
168 <210> SEQ ID NO: 20
169 <211> LENGTH: 7
170 <212> TYPE: PRT
171 <213> ORGANISM: Haemophilus influenzae
172 <400> SEQUENCE: 20
173 Lys Glu Trp Leu Leu Asp Pro
174 1 5
176 <210> SEQ ID NO: 21
177 <211> LENGTH: 32
178 <212> TYPE: DNA
179 <213> ORGANISM: Haemophilus influenzae
180 <400> SEQUENCE: 21
181 Gggaattcca aagagtggtt gtagaccccg ga
183 <210> SEQ ID NO: 22
184 <211> LENGTH: 10
185 <212> TYPE: PRT
186 <213> ORGANISM: Haemophilus influenzae
187 <400> SEQUENCE: 22
188 Met Lys Asn Ile Lys Ser Arg Leu Lys Leu
189 1 5 10
191 <210> SEQ ID NO: 23
192 <211> LENGTH: 30
193 <212> TYPE: DNA
194 <213> ORGANISM: Haemophilus influenzae
195 <400> SEQUENCE: 23
196 ataaaaata taaaaaggcag attaaaactc
198 <210> SEQ ID NO: 24
199 <211> LENGTH: 38
200 <212> TYPE: DNA
201 <213> ORGANISM: Haemophilus influenzae
202 <400> SEQUENCE: 24
203 ggaattcgga gttttaatct gcctttata ttttcat
205 <210> SEQ ID NO: 25
206 <211> LENGTH: 3681
207 <212> TYPE: DNA
208 <213> ORGANISM: Haemophilus influenzae
209 <400> SEQUENCE: 25
210 aaagaatgg tgtagaccc ggacaatgtt tccattaacg caggcacatc agaacgtAAC 60
211 gacgcttcac caacagaaga ttccctacc ggagcaggag gaaaggataa ccccaaaaaa 120
212 aacgctcaca acaaaccgac attaataaaac acaactcttg agcgtatatt aagtggcaac 180
213 acctttgtta atatcaactgc cagaaaaaaa atcacgtta atagtgtat caacatcaaa 240
214 gacagctccc atctaataact ctggagcggaa aatgataaca gcagcggcgt tgatattaa 300
215 ggcaatatca cttctactac tggcggaagc ttaactatcc actccagcgg ctggattgat 360

```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/806,709

DATE: 03/14/2005
TIME: 10:06:35

Input Set : N:\DA\US09806709.raw
Output Set: N:\CRF4\03142005\I806709.raw

```

216 attcataaaa acattacgct taattcaggg ctcttaaaca ttacaactaa acaaggagat 420
217 atcgcccttcg aaaaaggaa taacccaacc attacaggc aagggactat taccgcaggc 480
218 aatggtaaag gttttaggtt tgaaaacgcc tccctaaacg gtattggaa agggttactt 540
219 ttaaacatca aaaggattt aggaataat ttccaaatca taaactttt taacggaact 600
220 ttaaatattt cagggaaagt aaacatctca atggcatac ctaaaaaatg ggattatagt 660
221 aaattcaggg ggcgaaccta ttggAACGTA acccattaa atgtttccga aggcagtaag 720
222 ttaaacatca ctatcactc cagaggagat gacactgcag gcacccttaa cacccttat 780
223 aatttaaacs gtatatcatt caacaaagac actatcttg atgttaaaca aaacggggca 840
224 gtcaccttgc acatcaaggc gccaataggg gtaaaaata atcgttaattt gaattacgca 900
225 tcattcaatg gaaatatttc agttttagga ggagggatg tcaatttcaa acttctcgcc 960
226 tcattcctcta ccgctcaaac tcccggtgt tttataaattt ctaaacactt taatgtttca 1020
227 ggagggttca gtttagaatt tagaactgaa ggctcaacaa aagtcggcctt cttgataaat 1080
228 aatgatttaa cccttaatgc caccggaggta aacatatcgc tcttgcaagt tgaaggcatt 1140
229 gacgggatgtt ttggtaaagg cgttgttagt aaaaaaaaaa taacctttgc tggaggcaat 1200
230 atcacctttg gtcacaagaa agccataaca gaaatcgaag gcaatgtac tatcaataac 1260
231 aacgctaactc tcactctt cgggttccgat tttgacaacc atcaaaaacc ttaactatt 1320
232 aaaaaagatg tcatcattaa tagcggcaac cttaccgcgt gccggcaatgt tatcaatata 1380
233 aacggaaatc ttaccgttaa caatggcgcc aatcttaaag ctatcacaattt tttcactttt 1440
234 aatgttaggc gttttttga caacaaaggc aattcaataa ttcatttcgtc tagaggaggg 1500
235 gtaaaattta aagatataaa taacaccagg agttaaactt ttaaccacaa ctccgacacc 1560
236 attaccgtt ccattataga aggttaataa accaacaaggc cagggtattt gaatattttt 1620
237 gataataaaag gtaacgtga aatccaaattt ggcggcaata ttcgcacaaa agaaggtaat 1680
238 ctcacgattt cttccgataa attaataatc actaaccaga taacaatcaa gaagggtgtt 1740
239 aataaaagagg attctgttcc aacgcacggc aacaatgtca atctaaccat taaaaccaaa 1800
240 gaatttgcattt taacgggaga cttaaatattt tcaggcttgc ataaaggcaga aatcacagcc 1860
241 aaagagggttccgatttaat catcggttaat agtgtataata acaacaatgc taatgttaaa 1920
242 aaagttaacct ttaaccaggtaa taaagattcg aaaatcttgtt ctggcagtca caatgttaaca 1980
243 ctaaacatca aagtagaaac ctctaatggc aataatgacg ctgaaagcaa taatggcgat 2040
244 agcaccaggctt taacttattaa tgcaaaaaat gtaacaggtaa acaacaatata tacttctcac 2100
245 aaaacaggtaa atatcactgc gtcagaaat gttaccacca aagcggggcac aaccattaaat 2160
246 gcaaccatag gtagcgttaga agtaacaggcc aaaaagggtt atattaaagg tggaaattgaa 2220
247 tccaaattccg gtaatgtaaa tattacagcg agcggcgaca cgttaatgt aagtaacatc 2280
248 acaggtaaaa atgtgacagt ggcaggcgcgc tcagggtccg ttaacaaccacaaaaggatca 2340
249 actattaaatg caacaactgg taatgcaat attacaacca aaacagggttga aattaatggc 2400
250 gaagtttaat cagctccgg taatgttaat attacagcg gccggcaatata acttaatgtt 2460
251 agtaacatca ctggtcaaaa tgtaacaggta acagccaaact cagggtccat aacaaccaca 2520
252 gaaggctcaatccatca gacaacagggtt gatgcaataa ttacaacccaa aacaggttaat 2580
253 attaatygtt aagttgaaatc cagttctgtt tctgtgacgc ttattgcaac tggacaaact 2640
254 cttgtgttagt gtaatatttc aggtgacact gttaccattt ctggcgatataa aggttaattt 2700
255 accacacaaa caagctctaa gattaacggc actaaggatgt taaccacccat aagccaaatca 2760
256 ggtgatattt gttggcacaat ttctgtgttactt acggtaagcg tttagtgcgc cggtagctt 2820
257 accactcaagc caggctcaaa aatttggaaatc aaaaagggtt aggctaatgtt aacaaggcaca 2880
258 acaggtaaaa ttggcggtac aatctctggc aatacaggtaa atgttacagc aaataactgtt 2940
259 aattttaactt ttaaagatgg cgcaagaattt aaaaagggttgc gccggagctgt gacttttacc 3000
260 gcaacaggag gtactttaac caccggaaaca agttctgttataacttcaatggcgtt 3060
261 acaactctca cggccaaagggc tagcagtatc gcaaggaaatc tcaatggcgcaatgtgaca 3120
262 ttaaataccca caggcactttt aacttactgtt gcaagggttcaaa aatcggggc agccaggcggc 3180
263 accctgggtt ttaatgcaaa agatgtcaatc ttggacggcg cggcattagg tgaccgtaca 3240
264 gaagttaaatg taactaacgc aatggctcc ggcaggctaa tcggcacaac ctcaaggcaca 3300

```

03/14/05 MON 10:51 FAX 703 308 4221

PTO/STIC

008

Page 6 of 7

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/806,709

DATE: 03/14/2005

TIME: 10:06:36

Input Set : N:\DA\US09806709.raw

Output Set: N:\CRF4\03142005\I806709.raw

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER: _____**

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.